

## CLAIM AMENDMENTS

### 1. (Currently Amended)

A multi-stage electric pump unit, ~~of those that~~  
~~consist of~~ having a multi-stage centrifugal pump with an  
electric motor coupled directly to the pump, where each  
stage ~~consists of a~~ has a pump, an impeller and a diffuser,  
which each have channels with vaned and vaneless zones.  
~~These~~ each of these zones are delimited by a shroud-surface  
and a hub-surface, where ~~the~~  $\beta$  angle  $\beta$  is the angle of the  
tangent at each point, characterized in that ~~because, given~~  
~~that the~~ Y-axis of the electric pump is the radial co-  
ordinate and X is the axial co-ordinate, for flow rates, Q,  
between 2500 and 8000 litres/minute, the points of the  
impeller and diffuser surface comply with the sixth degree  
polynomial equation,  $Y = f(x) = Ax^6 + Bx^5 + Cx^4 + Dx^3 + Ex^2 +$   
 $Fx + G$ , where on the diffuser:

a) on the hub, the vaneless zone;  $A=B=C=D=E=0$ ;  
 $F=0.6605$ ;  $G=20.45$ ;

b) on the shroud, the vaneless zone;  $A=B=C=D=E=0$ ;  
 $F=0.7225$ ;  $G=55.648$ ;

c) on the hub, the vaned zone;  $A=-9E-09$ ;  $B=7E-06$ ;  
 $C=-0.0019$ ;  $D=0.3064$ ;  $E=-26.923$ ;  $F=1256.3$ ;  $G=-24283$ ;

d) on the shroud, the vaned zone:  $A=1E-10$ ;  $B=-9E-08$ ;  
 $C=2E-05$ ;  $D=-0.0033$ ;  $E=0.2349$ ;  $F=-7.616$ ;  $G=174.28$ ;

e) on the hub, the vaneless zone;  $A=0$ ;  $B=0$ ;  $C=-1E-05$ ;  
 $D=0.0073$ ;  $E=-1.7542$ ;  $F=186.27$ ;  $G=-7311.6$ ;

f) on the shroud, the vaneless zone;  $A=0$ ;  $B=0$ ;  $C=0$ ;  
 $D=0.0053$ ;  $E=-2.6745$ ;  $F=446.37$ ;  $-G=24717$ ;

g) on the hub,  $\beta$ ;  $A=0$ ;  $B=0$ ;  $C=1E-06$ ;  $D=-0.0002$ ;  
 $E=0.0203$ ;  $F=-1.0819$ ;  $G=156.82$ ;

h) on the shroud,  $\beta$ ;  $A=0$ ;  $B=0$ ;  $C=3E-07$ ;  $D=-1E-04$ ;  
 $E=0.0101$ ;  $F=-0.7587$ ;  $G=175$ .

2. (Currently Amended)

A multi-stage electric pump unit, ~~in accordance with the preceding claim~~ of Claim 1, characterized because on the impeller:

a1) on the hub, the vaneless zone;  $A=0$ ;  $B=0$ ;  $C=0$ ;  
 $D=6E-05$ ;  $E=0.0014$ ;  $F=-0.0146$ ;  $G=27.511$ ;

b1) on the shroud, the vaneless zone;  $A=0$ ;  $B=0$ ;  $C=0$ ;  
 $D=0$ ;  $E=0$ ;  $F=0$ ;  $G=64.5$ ;

c1) on the hub, the vaned zone;  $A=0$ ;  $B=0$ ;  $C=5E-06$ ;  
 $D=-0.0014$ ;  $E=0.1535$ ;  $F=-6.3821$ ;  $G=121.24$ ;

d1) on the shroud, the vaned zone;  $A=-4E-08$ ;  $B=8E-06$ ;  
 $C=-0.0006$ ;  $D=0.0247$ ;  $E=-0.04771$ ;  $F=4.3023$ ;  $G=50.015$ ;

e1) on the hub,  $\beta$ ;  $A=0$ ;  $B=3E-09$ ;  $C=-9E-07$ ;  $D=0.0001$ ;  
 $E=-0.0042$ ;  $F=-0.0915$ ;  $G=34.402$ ;

f1) on the shroud,  $\beta$ ;  $A=0$ ;  $B=1E-09$ ;  $C=-5E-07$ ;  $D=6E-05$ ;  
 $E=-0.0044$ ;  $F=0.1822$ ;  $G=22.2$ .

3. (Currently Amended)

A multi-stage electric pump unit, ~~in accordance with the first claim,~~ of Claim 1, characterized because on the impeller:

a2) on the hub, the vaneless zone;  $A=0$ ;  $B=0$ ;  $C=0$ ;  
 $D=5E-05$ ;  $E=0.0013$ ;  $F=-0.0139$ ;  $G=27.511$ ;

b2) on the shroud, the vaneless zone;  $A=0$ ;  $B=0$ ;  $C=0$ ;  
 $D=0$ ;  $E=0$ ;  $F=0$ ;  $G=64.5$ ;

c2) on the hub, the vaned zone;  $A=0$ ;  $B=0$ ;  $C=5E-06$ ;  
 $D=-0.0012$ ;  $E=0.1205$ ;  $F=-4.7599$ ;  $G=93.614$ ;

d2) on the shroud, the vaned zone;  $A=0$ ;  $B=7E-07$ ;  $C=-$   
 $0.0001$ ;  $D=0.0058$ ;  $E=-0.113$ ;  $F=0.8709$ ;  $G=62.273$ ;

e2) on the hub,  $\beta$ ;  $A=0$ ;  $B=0$ ;  $C=9E-08$ ;  $D=-3E-05$ ;  
 $E=0.0002$ ;  $F=0.0246$ ;  $G=41.062$ ;

f2) on the shroud  $\beta$ ;  $A=0$ ;  $B=0$ ;  $C=-6E-07$ ;  $D=0.0001$ ;  
 $E=-0.0126$ ;  $F=0.5887$ ;  $G=23.694$ .